

[0017] FIG. 6 shows a plan view of one embodiment of an absorbent garment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0018] The various embodiments of the invention will be described in the context of a disposable assembly 10 which includes a disposable absorbent garment article, such as a disposable diaper. Typically, the disposable articles are intended for limited use and are not intended to be laundered or otherwise cleaned for reuse. It is, however, readily apparent that the present invention could also be employed with other articles, such as children's training pants, adult incontinence products, feminine care products, items for bathing kits; items for dining; items for medical kits; items for shoe polish kits; items for use at the beach; and other applications where it is desirable to cover a surface with a drape while performing a particular task.

[0019] The disposable assembly 10 has three main component categories, namely: a flexible package 12; a drape 14, which may be sized appropriately to function as a changing pad; and one or more articles 16, which may take many different forms, e.g. diapers and wipes. With reference to FIG. 3, a representative disposable assembly 10 is generally shown in its fully open and completely unfolded "deployed" condition. By contrast, the disposable assembly 10 of the invention can advantageously be folded and configured into the efficient, compact, storage condition shown in FIG. 1.

[0020] Package 12 includes one or more compartments for holding article(s) 16. In one exemplary embodiment shown in FIGS. 1 and 2, package 12 may be made from two separate packets 22 which are joined together at a joint 24. With reference to FIG. 2, each separate packet 22 defines a compartment, such as a first compartment 18 and a second compartment 20. However, more or less compartments are possible, as described herein.

[0021] In the various configurations of the invention, the package 12 is desirably composed of any operable sheet material, which is sufficiently flexible and a foldable, such as a woven fabric, a nonwoven fabric, a cellulosic sheet, a polymer film or the like, as well as combinations thereof. Suitable woven fabrics can include, for example, woven fabrics of cotton, rayon, linen, as well as other natural or synthetic fibers, and the like. Examples of suitable nonwoven fabrics include hydroentangled pulp, spunbond fabrics, SMS (spunbond-meltblown-spunbond) fabrics, SBL (stretch-bonded-laminate) fabrics, GORETEX fabrics, STL (stretch-thermal-laminate) fabrics or the like, as well as combinations thereof. Suitable polymer films include, for example, films composed of polyethylene, LDPE (low-density polyethylene), LLDPE (linear low-density polyethylene), ULDPPE (ultra-low-density polyethylene), HDPE (high-density polyethylene), polypropylene, polyethylene/EVA (ethylene vinyl acetate) copolymers, a blend of polyethylenes, paper, nylon, cellophane, PVC (polyvinyl chloride) film, metallic foil, metalized films, polyester films, microporous breathable films or the like, as well as combinations thereof. In the representatively shown arrangement, the package 12 is a film composed of a low density polyethylene blend.

[0022] In particular aspects of the invention, the material of the package 12 is configured to be substantially liquid impermeable. For example, the package 12 can be constructed of a substantially liquid impermeable polymer film. Alternatively, the package 12 can be composed of a fabric which has been treated or otherwise configured to be substantially liquid

impermeable. For example, the package 12 may be composed of a sheet comprising a laminate of a polymer film and a woven or nonwoven fabric layer.

[0023] Desirably, the material of the package 12 is configured to be thermally fusible. For example the package can include films or fibers which are heat-bondable. Accordingly, a bonding of the package can be accomplished by adhesive bonding, thermal bonding, thermal-mechanical embossing or crimping, ultrasonic bonding, or the like.

[0024] In the embodiment of the present invention shown in FIGS. 1-3, each packet 22 may be formed from a rectangular sheet of material (or a continuous sheet in an assembly line), folded together and bonded to form a flattened tube having a seam, such as the lap seam 38. In some applications, this folding step occurs after an article 16 has been introduced onto the sheet of material. Therefore, the act of folding causes the sheet to surround the article 16. At this stage of construction, the packet constructed from a single sheet has two opposite open ends, and the packet constructed from the continuous sheet has a series of spaced apart article 16 within a continuous tube. In the first instance, the open ends are bonded together to enclose the article 16 inside the packet. In the second instance, the tube is bonded together along the portions between the articles 16, and later cut into discrete units. Each single packet 22 ultimately has two opposite sealed ends 40. The finished packet further has an accessible surface 48, and an attachment surface 50 located oppositely thereof.

[0025] The packets may be placed in series such that two sealed ends 40 of the separate packets are aligned together and bonded to form a joint 42, such as the fin seam that is best seen in FIGS. 2 and 3. Other joints such as lap seams are contemplated.

[0026] While the package 12 is depicted as being constructed from two separate packets 22, other alternative constructions are possible. In one such alternative, package 12 may be a substantially unitary member composed of a single, unit sheet of tubular material. When the packets 22 are constructed from a continuous sheet or tubular material, they may remain integrally connected, and cut from the continuous tubular configuration two at a time. In yet another alternative, the package 12 is composed of a sheet material that is an assembly of a plurality of pieces joined and affixed along their edges to form a larger contiguous sheet.

[0027] Referring now to FIG. 3, in a particular aspect of the invention, the package 12 has at least one appointed fold line 30, which in the representative configuration, is shown extending generally along the longitudinal dimension of the deployed assembly, coinciding with the joint 42. Desirably, the fold line 30 has a location which corresponds to and substantially coincides with a location of at least one of the fold lines of the drape 14, such as longitudinally extending fold line 34. Accordingly, the package 12 and the drape 14 can be cooperatively folded about their respective, coinciding longitudinal fold lines 30, 34.

[0028] So that articles 16 may be readily accessed from each packet 22 without having to cut the packet or create an arbitrary tear thereon, an opening of some kind may be located on a surface of the packet. For instance, a finished packet 22 has length 44 and a width 46 (with respect to the longitudinal axis of the deployed or used disposable assembly 10, shown in FIG. 5). In the embodiment of the present invention shown in FIGS. 3 and 5, each packet 22 has an opening 52 is placed at its accessible surface 48. The opening